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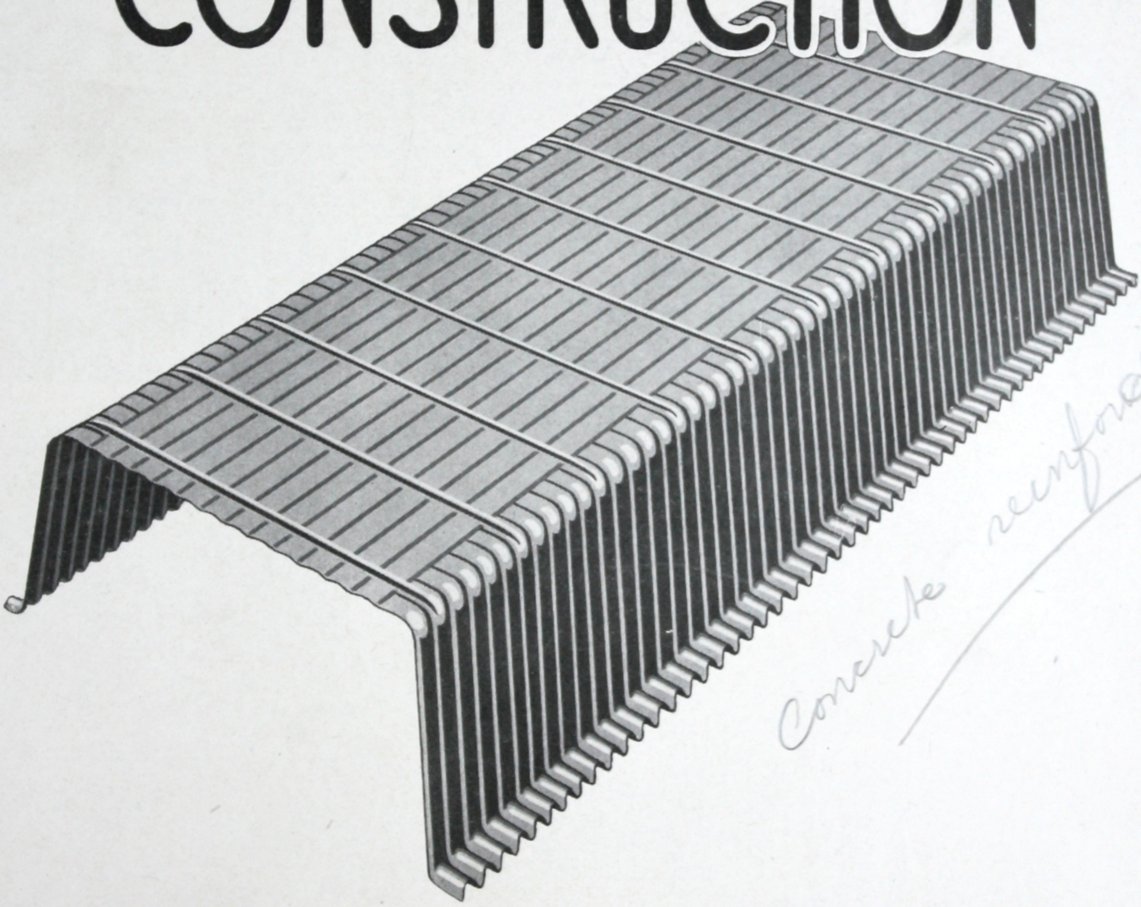
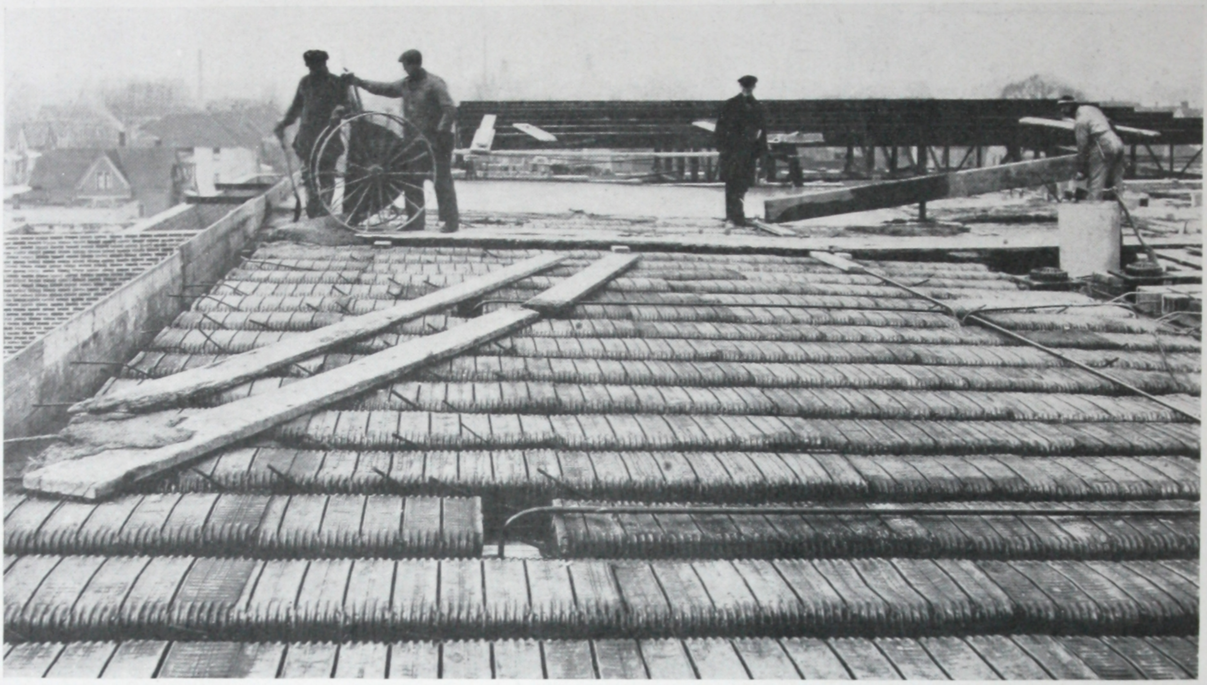
TRUSCON FLORETYLE CONSTRUCTION



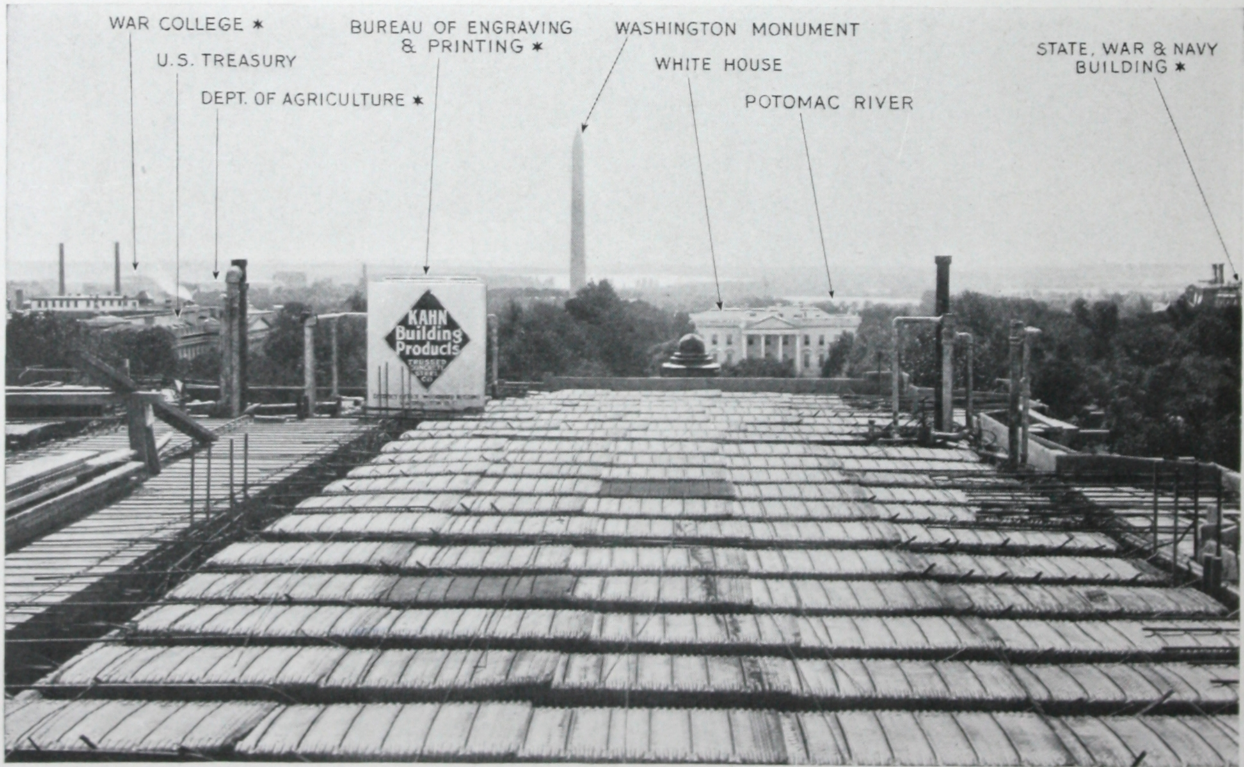
Concrete reinforcing

TRUSCON
STEEL CO.
TRUSCON
BUILDING
PRODUCTS

TRUSCON
STEEL CO
YOUNGSTOWN O.
WAREHOUSES AND SALES
OFFICES IN PRINCIPAL CITIES



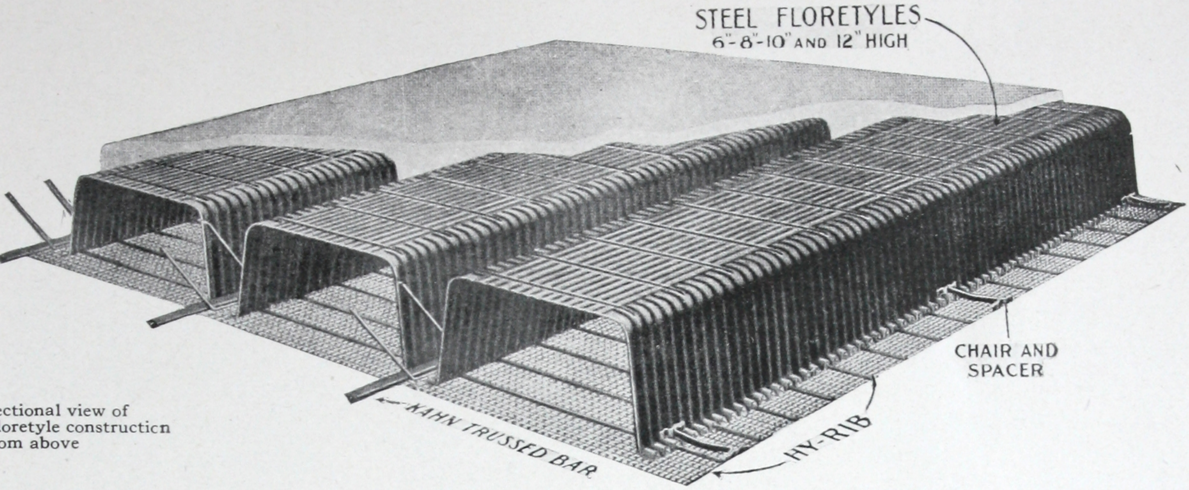
Truscon Steel Floretyle in Dwyer School, Detroit, Mich.
Malcomson, Higginbotham & Palmer, Archts.



Truscon Floretyle before concreting, Lafayette Hotel, Washington, D. C.
B. S. Simmons, Architect

Remarkable photograph of Floretyle Construction at Lafayette Hotel, Washington, D. C., with well known structures in background. Truscon Reinforced Concrete was used in the War College, Department of Agriculture and Bureau of Engraving and Printing; Truscon Sliding Sash in the Bureau of Engraving and Printing; and Hy-Rib in remodeling State, War and Navy Building.

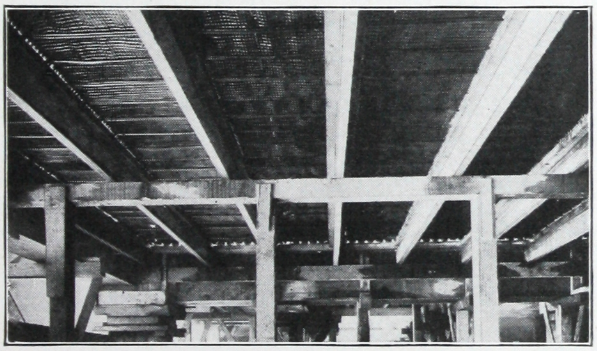
ID 90-B193 TCF



Sectional view of Floretyle construction from above

TRUSCON FLORETYLE CONSTRUCTION

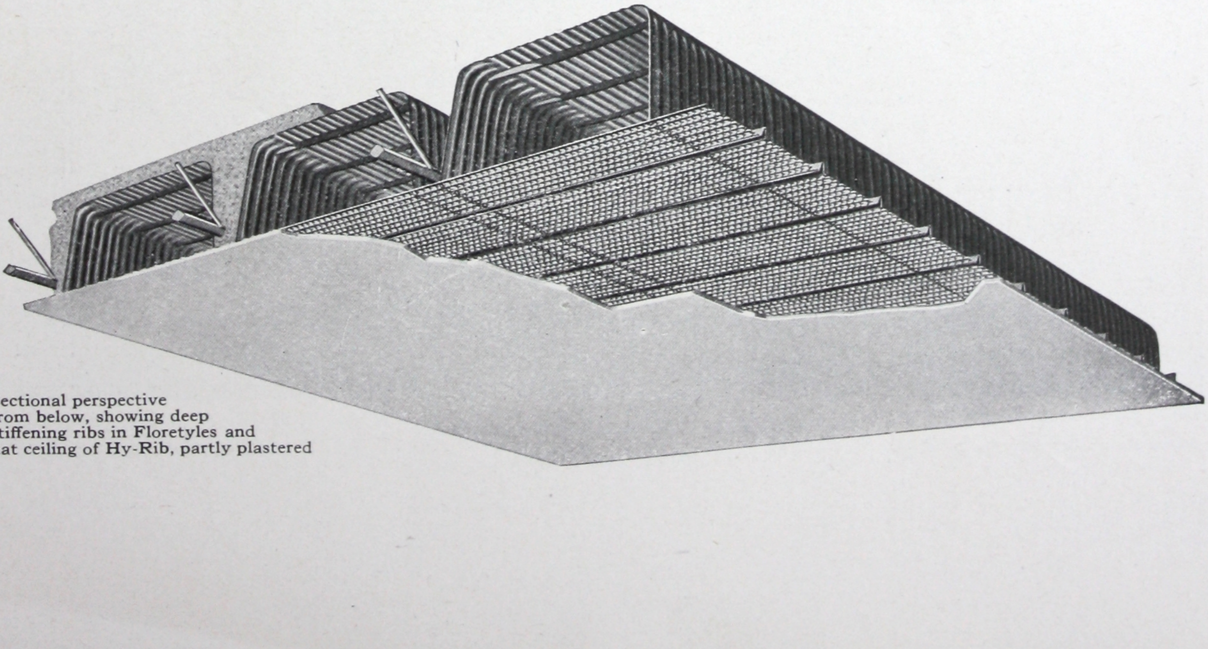
Truscon Steel Floretyles are manufactured of the highest grade open-hearth steel under powerful presses operating multiple dies. Each Floretyle must of necessity be accurate and uniform. The design of the Floretyle is such as to give greatest possible stiffness and rigidity, preventing their deformation in handling. Note the particularly deep stiffening ribs across the top, the corrugated sides, the specially rounded corners and the corrugated flanges on the bottom edges.



WOODWARD-CLARK BUILDING, PORTLAND, ORE.
Simple and economical centering required with **FLORETYLE** Construction

In order to insure absolute accuracy in the width of the joists and the correct distance of the reinforcing steel above the Hy-Rib, we can furnish a specially formed spacer chair of width required for the joists. The corrugated ends of these spacer chairs fit into the corrugations of the sides of the Floretyle, assuring absolute accuracy of construction.

This popular type of reinforced concrete construction consists of rows of specially manufactured hollow steel tile covered with a layer of concrete and separated by reinforced concrete joists. These deep, narrow joists carry the loads directly to the supports, while the Floretyles act merely as fillers, saving concrete, reducing dead weight, simplifying centering and economizing construction.



Sectional perspective from below, showing deep stiffening ribs in Floretyles and flat ceiling of Hy-Rib, partly plastered

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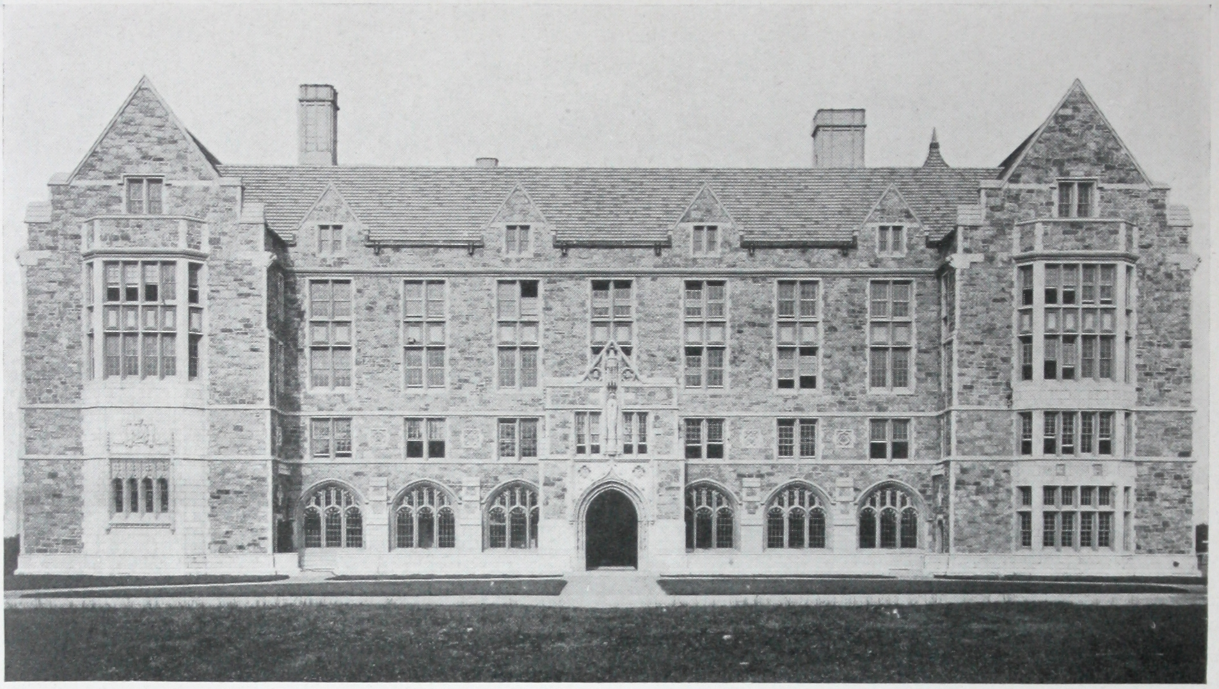
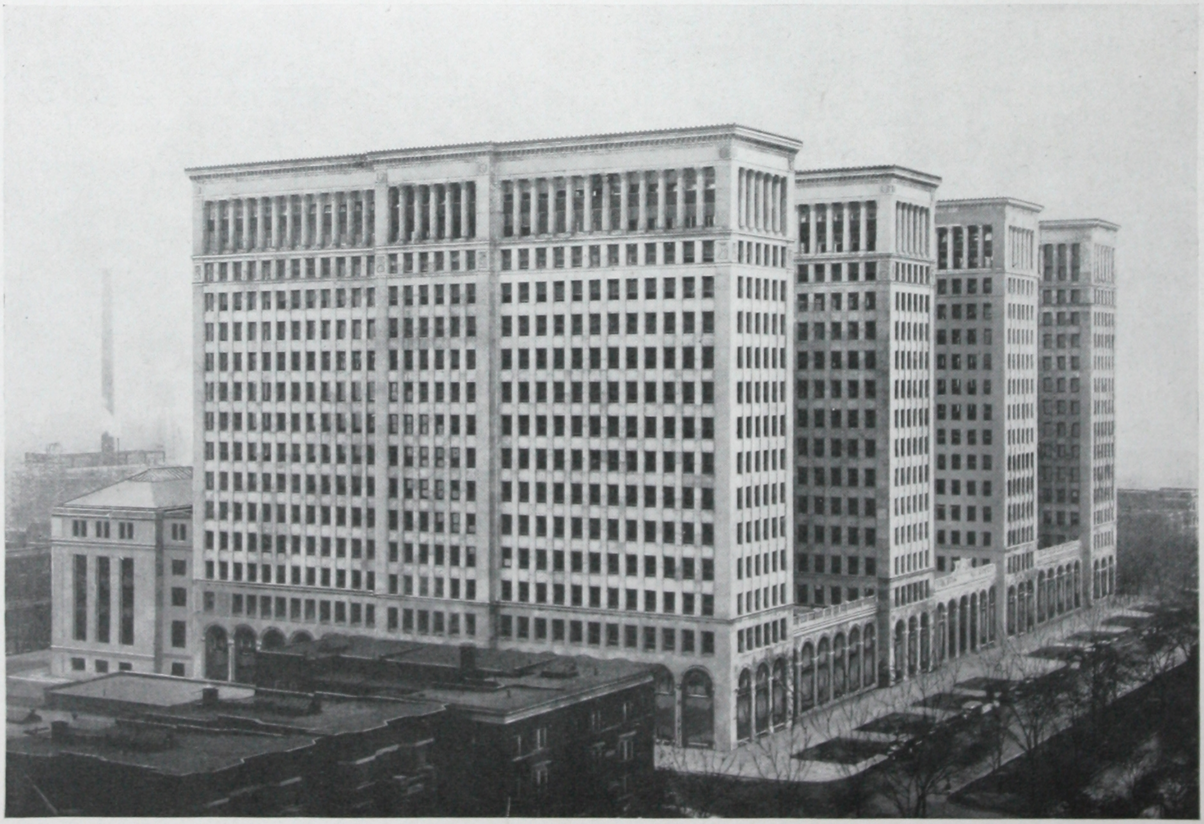


McGinnis & Walsh, Archts.

Faculty Bldg., Boston College, Newton, Mass.
Concrete Contractor, John T. Scully Foundation Co.
Truscon Floretyle Construction

Chas. Logue Bldg. Co., Contrs.



Albert Kahn, Archt.

General Motors Bldg., Detroit, Michigan
Truscon Steel Floretyles

Thompson-Starrett Co., Contrs.

Advantages of Truscon Floretyle and Floredome Construction

Flat Ceilings Without Column-Caps or Brackets. The beams which support the Floretyle and Floredome construction can be readily made the same depth as the floor construction. In this way an absolutely flat ceiling is secured throughout the entire building. Not only are the projecting beams eliminated, but also all column caps and brackets. Panels may be any shape, either rectangular or square. Long spans of light weight are readily constructed. The calculation for the design is absolutely certain by standard methods.

Long Spans Without Beams. The light weight of the Floretyle construction and the deep joists permit the use of long spans without any intermediate beams. This feature is important in all classes of buildings, but particularly in schools, where the Floretyle construction easily spans the full width of the room. Spans up to 30 ft. are easily built without beams.

Sound-Proof Construction. The large air spaces in the Floretyle provide perfect insulation against the transmission of sound. This is an important advantage in hotels, offices, schools, etc.

Greatly Simplified Centering. As can be readily seen, only the simplest and most inexpensive centering is required with Floretyle construction. The 3/8″ Hy-Rib Lath is laid over the centering so that only a rough flooring is needed. Some contractors eliminate the flooring entirely, providing only a board underneath the joist. The saving in both the material and labor for the centering is a very large item.

No Dropping nor Discoloration of Plaster. The plaster for the ceiling is applied directly to the Hy-Rib, which provides a perfect key for the plaster. There is no dropping off of plaster, such as may occur with other forms of concrete construction. Time and labor is thus saved. The plaster is applied to the metal Hy-Rib Lath which extends uniformly and continuously throughout the ceiling; so there is no chance for discoloration of plaster such as may occur with combined terra-cotta tile and concrete construction.

Exceptional Strength and Rigidity. The joists are deep, adding to the stiffness of the construction. The "T" beam design assures the maximum efficiency and strength.

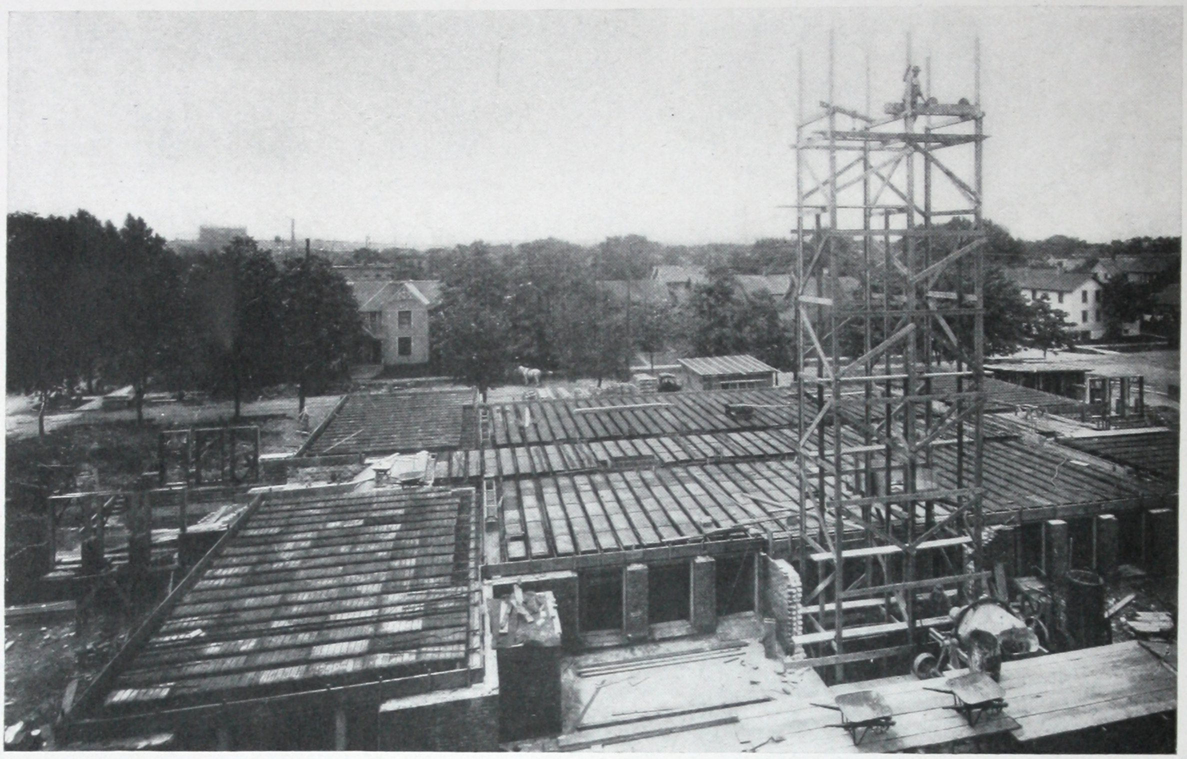
Great Saving in Weight. Floretyles take the place of heavy masses of concrete, and at the same time provide a construction of great rigidity. The marked reduction in the weight of the construction lowers its cost and saves greatly in the supporting framework. This is particularly true in buildings with light loads, such as hotels, offices, and stores, where the saving in columns, girders, and foundation will often amount to 15%.

Economy in Materials and Labor. The reinforced concrete joists are deep and narrow and "T" shaped, giving the greatest possible economy in concrete and steel. A Floretyle 4 feet long is approximately 7 times as large, but weighs only 35% to 40% as much as a 12″ x 12″ terra-cotta tile. Floretyles can therefore be laid much more quickly and at much lower cost. The joists, being at least 24½″ on centers, require less concrete per square foot of floor and are filled more quickly than in terra-cotta tile construction, where the joists are every 16″.

Great Speed of Construction. The saving in materials, the large units that are handled, the reduction of field labor, the simple centering and the wide spacing of joists save time in the construction of floors and greatly increase the speed of erection with Floretyle construction.

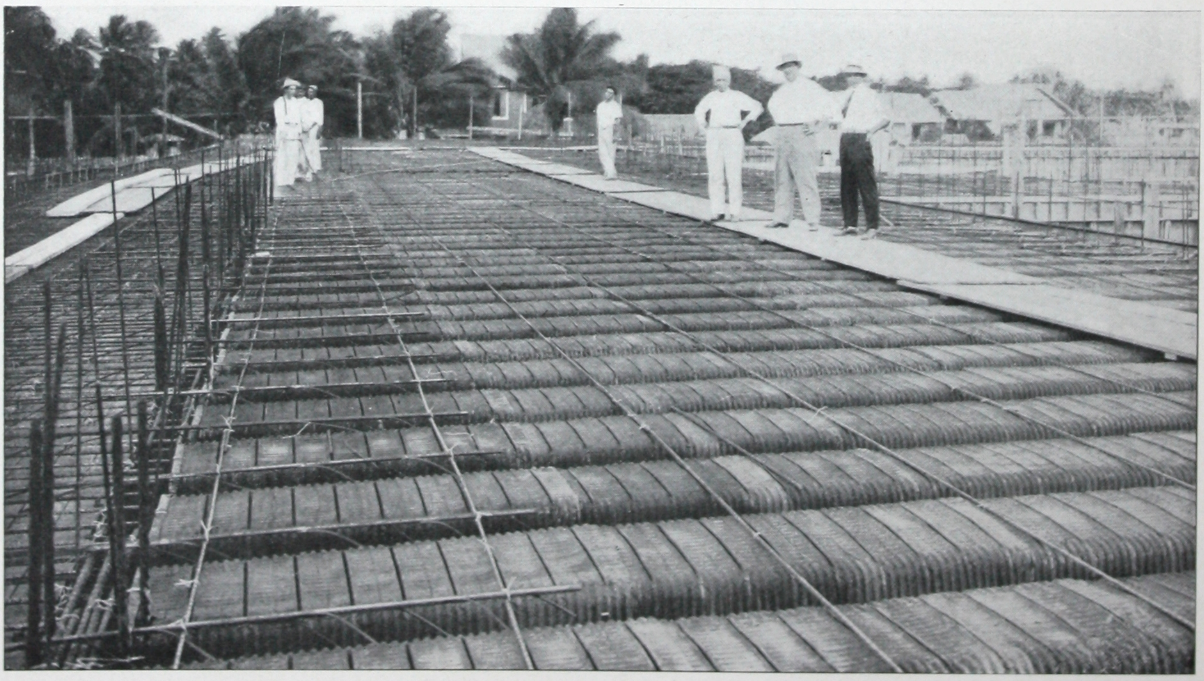
No Breakage or Loss of Concrete. Floretyles being made of steel are not subject to breakage in transit and in handling as in the case of terra-cotta tile. The ends of Floretyle lap over each other, giving an absolutely tight joint. There is no loss of concrete flowing through joints or filling up broken tile as occurs with terra-cotta tile.

Shipped Anywhere with Low Freight Rate. The light weight of the Floretyles saves greatly in freight, so that they can be economically shipped to all parts of this country and abroad. The Floretyles slightly taper so that they can be readily nested to make a full carload shipment.



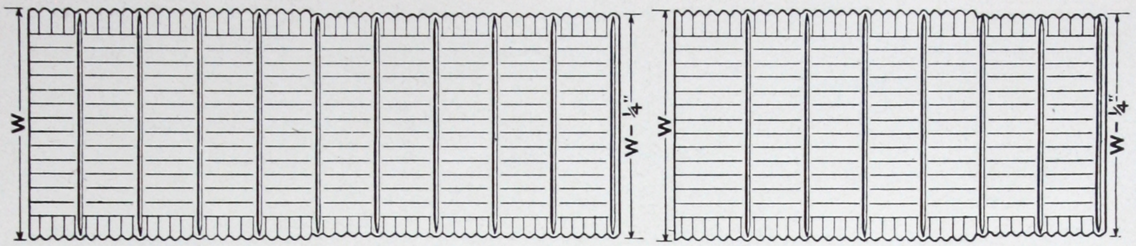
H. H. Turner, Archt.

Lexington School, Grand Rapids, Michigan. Flat ceilings are secured by use of Floretyle Construction spanning the full width of rooms

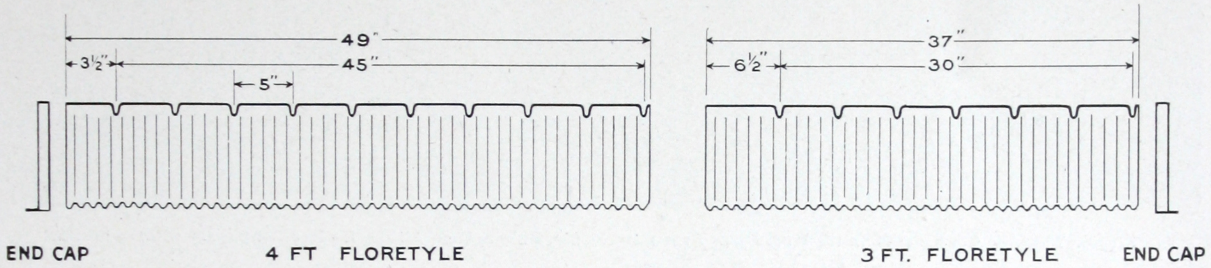


Presbyterian Hospital, San Juan, Porto Rico. F. B. Hatch, Contractor

Truscon Floretyle before concreting



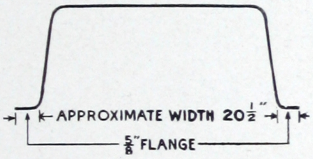
TOP VIEW OF FLORETYLES



Properties of Ribbed Steel Floretyles

Standard Heights: 6″, 8″, 10″, and 12″.

14″ Floretyles are not carried in stock but can be furnished on special order if sufficient time is allowed.



Approximate Width at Base: 20½″, exclusive of ⅝″ flanges along bottom edges.

Standard Lengths (Nominal): 4′-0″ and 3′-0″.

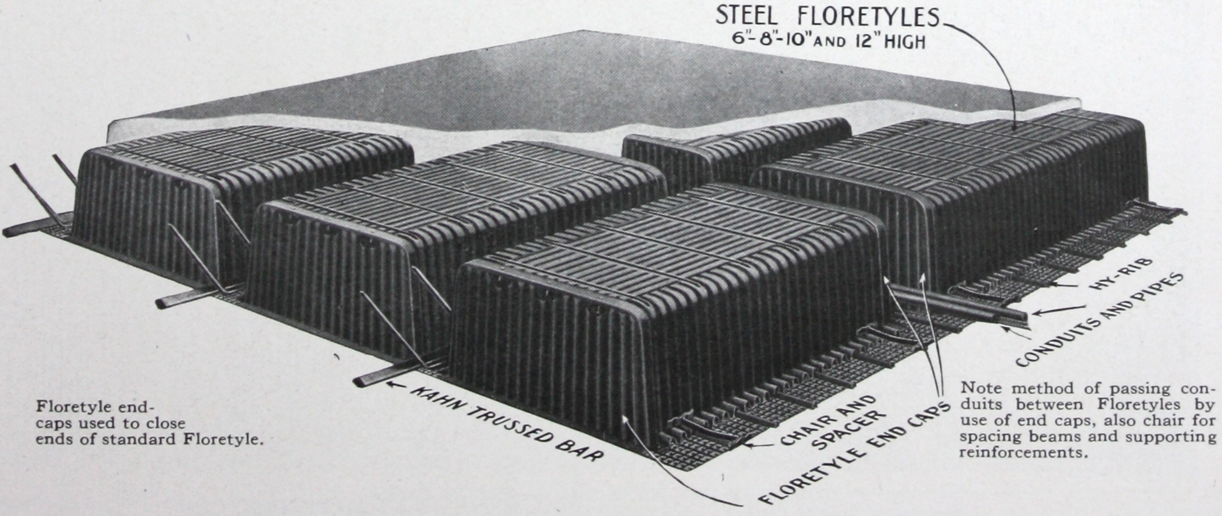
Actual lengths are 1″ greater to provide for lap.

Floretyles are made with one end ¼ in. wider than the other, so that they can be easily lapped. The small end has a deep rib at the edge and should always be placed under the large end, which is free of ribs for some distance.

End Caps, manufactured under special dies, are used to close the ends of Floretyles. The End Caps are smaller at the base than Floretyles, but are readily placed by sliding them over the ends from above.

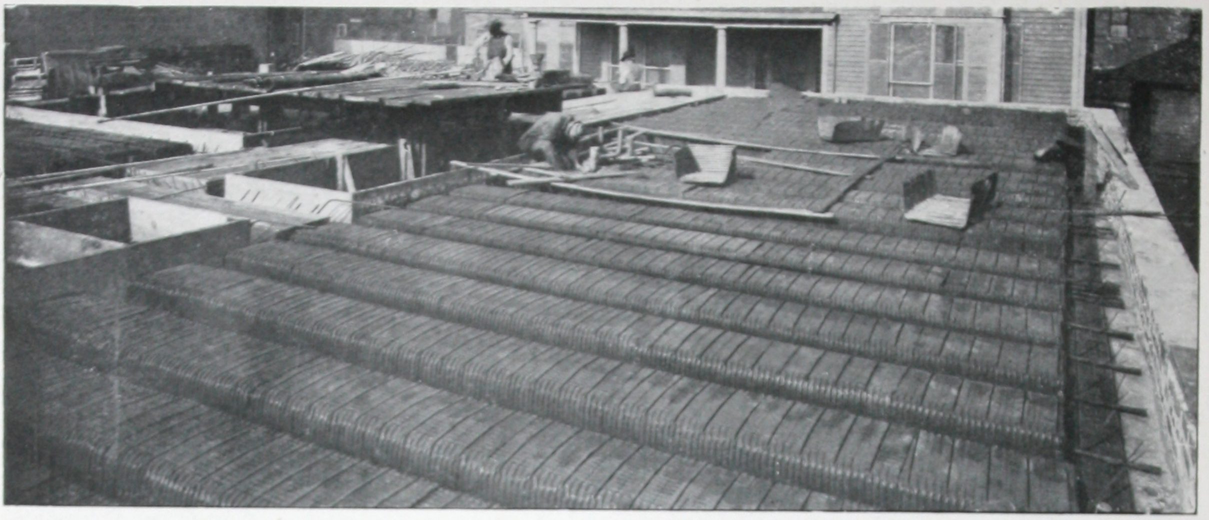
Spacer Chairs are furnished when called for with Steel Floretyles to insure the uniform width of joists and placing of reinforcement. Standard sizes are 4″, 4½″ and 5″ wide for joists of same width. Spacer Chairs are located at the end of the rows and at each lap joint of the Floretyles.

⅜″ Hy-Rib Lath is used for ceilings underneath.

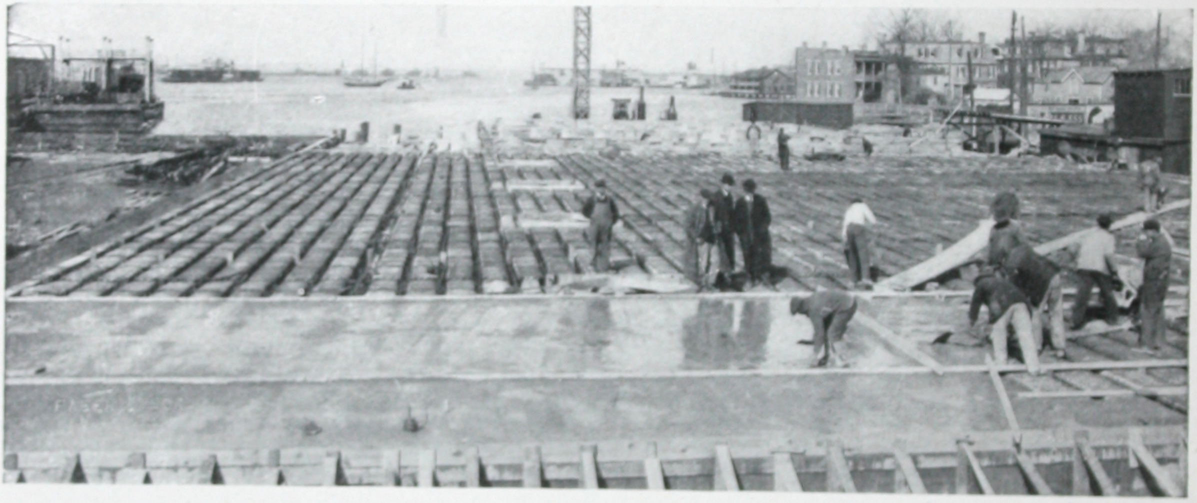


Floretyle end-caps used to close ends of standard Floretyle.

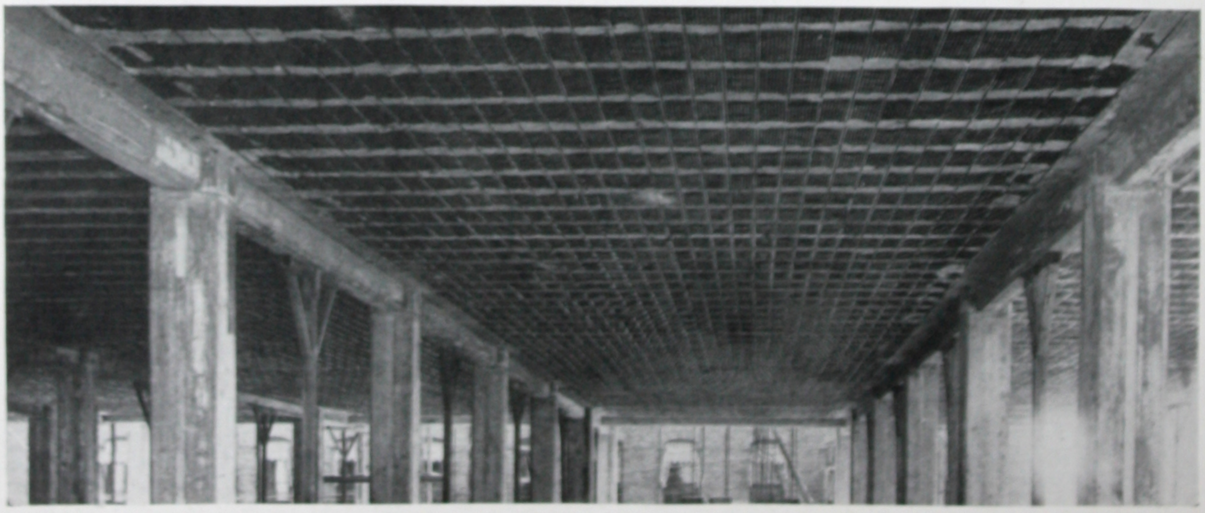
Note method of passing conduits between Floretyles by use of end caps, also chair for spacing beams and supporting reinforcements.



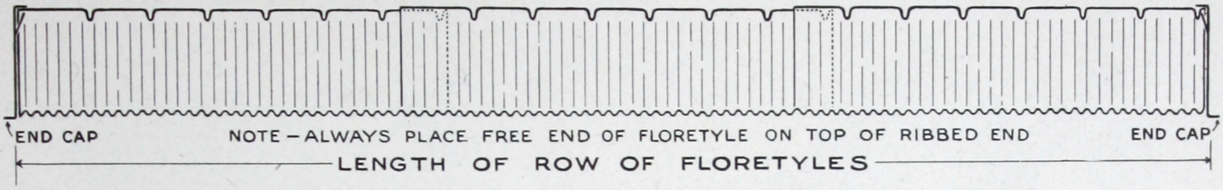
Truscon Floretyle Construction in the N. J. Ridge Apartment House, Birmingham, Alabama. Note long spans without beams.



Harwood & Moss, General Contractors. B. F. Mitchell, Architect.
Truscon Floretyle Construction, Southgate Terminal Warehouse, Norfolk, Va.



FIDELITY BUILDING, CEDAR RAPIDS, IOWA.
Under side of Truscon Floretyle Construction showing Hy-Rib ceiling before plastering


END CAP
NOTE – ALWAYS PLACE FREE END OF FLORETYLE ON TOP OF RIBBED END
END CAP
LENGTH OF ROW OF FLORETYLES

Installation of Ribbed Floretyle Construction

Placing Hy-Rib—The Hy-Rib sheets are first laid on the centering, thoroughly interlocking them at sides and ends and wiring the interlocked ribs. The ribs of the Hy-Rib run at right angles to the joists of the Floretyle Construction.

Placing Floretyles—To lay a row of Floretyles place the first tyle with the large or free end next to the support. The free end of the next Floretyle is then readily lapped over the ribbed end of the first tyle and the same operation continued throughout the length of the row. The table below gives arrangements of Floretyles to obtain any desired length of row, and diagrams show methods of lapping Floretyles at ends. The length of lap may be varied considerably at each joint so that exact length of row can be secured.

Floretyles can be rigidly tacked to the wood forms by nailing through the flanges along the bottom edge. A nail at each end and center on both sides (four nails in all) should be sufficient for each Floretyle. **These nails should be tacked lightly so that they enter the wood not over ¼ inch,** in order not to interfere in any way with the plastering after removal of forms. The Floretyles at each end of the rows should not be tacked down until the End Caps are set in place.

Maximum Lengths of Rows of Floretyles with End Caps to Close the Rows at Each End.

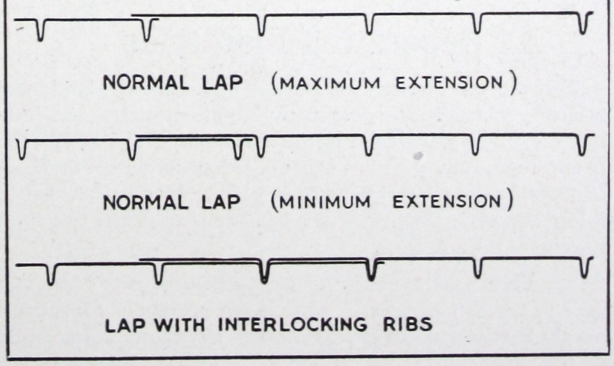
Combinations of Tyles			Maximum Lengths of Rows	Combinations of Tyles			Maximum Lengths of Rows
No. of 3'0" Floretyles	No. of 4'0" Floretyles	Floretyle End Caps		No. of 3'0" Floretyles	No. of 4'0" Floretyles	Floretyle End Caps	
2	0	2	6′–0″	1	4	2	19′–0″
1	1	2	7′–0″	0	5	2	20′–0″
0	2	2	8′–0″	3	3	2	21′–0″
3	0	2	9′–0″	2	4	2	22′–0″
2	1	2	10′–0″	1	5	2	23′–0″
1	2	2	11′–0″	0	6	2	24′–0″
0	3	2	12′–0″	3	4	2	25′–0″
3	1	2	13′–0″	2	5	2	26′–0″
2	2	2	14′–0″	1	6	2	27′–0″
1	3	2	15′–0″	0	7	2	28′–0″
0	4	2	16′–0″	3	5	2	29′–0″
3	2	2	17′–0″	2	6	2	30′–0″
2	3	2	18′–0″	1	7	2	31′–0″

The rows of the Floretyle are accurately spaced by means of the Spacer Chairs which are the exact width of the joist. These Spacer Chairs also serve the purpose of holding the reinforcement the correct distance above the Hy-Rib.

Placing End Caps—The End Cap is placed by sliding it over the end of the Floretyle from above. The lugs near the top of the End Caps fit under the free ends of the Floretyles, furnishing a support for the end and permitting a nail to be driven through the cap and edge of the tyle. The end caps are merely fitted over the ribbed ends of Floretyles. In all cases the two corner flanges at the base of the End Caps should be lightly tacked to the wood forms. End Caps can also be used at any place in the span where conduits or pipes extend across the joists (see illustration page 7).

Placing Reinforcement and Concrete—Placing of reinforcing steel and concrete is the same as for other types of reinforced concrete construction. The Spacer Chairs hold the reinforcement in the joists the correct distance above the forms. **Planks should be laid over the top of the Floretyles for trucking and walking upon.**

Methods of Lapping Floretyles at ends.

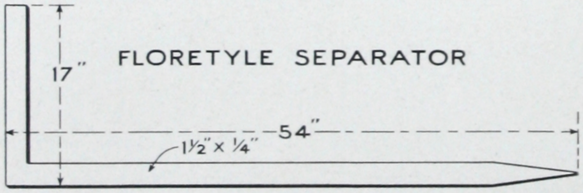

NORMAL LAP (MAXIMUM EXTENSION)
NORMAL LAP (MINIMUM EXTENSION)
LAP WITH INTERLOCKING RIBS

A stack of 50 Floretyles, handled on a two-wheeled truck, is equivalent in floor construction to 333 terra-cotta tiles weighing over 10,000 lbs.

Handling Floretyles

The correct handling of Floretyles starts with their arrival in the cars. Floretyles are shipped nested compactly in bundles usually containing 50 tyles. Unload and handle Floretyles, right side up, in original sized bundles.

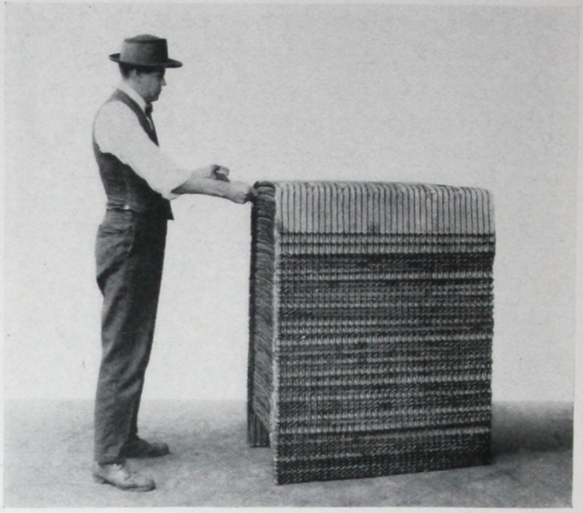
At the building site arrange bundles neatly in rows, resting them on their bottom edges. An ordinary two-wheeled truck is very useful in moving the bundles from place to place. A stack of Floretyles sufficient to cover 400 sq. ft. of floor is easily handled by one man in one operation. Consider the saving in time and labor compared to terra-cotta tile, which would weigh 10,000 lbs., for equal covering capacity. Also note the great economy of space, an important factor, especially in congested city districts. The Floretyles should be hoisted in original bundles to the floor on which they are to be used. The hoist will easily take two bundles (100 Floretyles) on one lift, sufficient to cover 800 sq. ft. of floor.



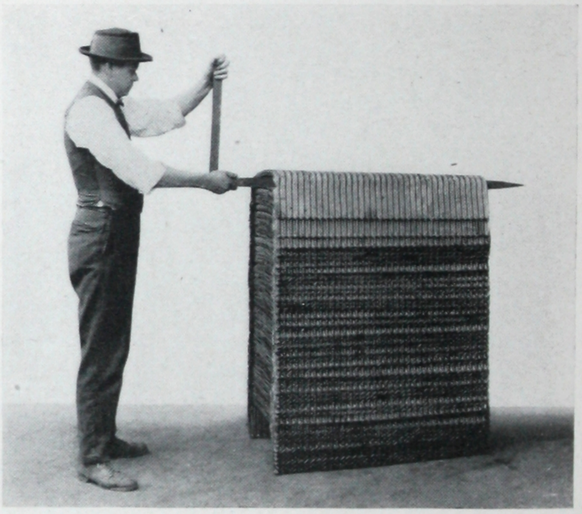
Separating Floretyles

The method of separating the Floretyles is very simple and is clearly shown in the accompanying illustrations. A Floretyle Separator is included in the first shipment of Floretyles. Insert Separator, with flat side up, below corner of top sheet and push through bundle. Then turn Separator on edge to loosen Floretyle and use it as a lever to remove the tyle from the top of the stack.

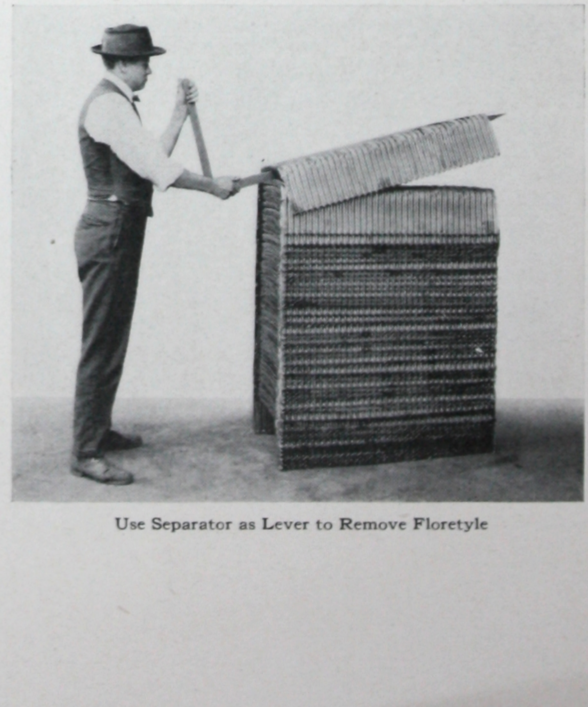
Any similar flat bar may be used as Separator or Floretyles may be lifted from stack. **Always set stacks of Floretyles on their bottom edges; never lay them on sides, ends or top.**



Insert Separator with Flat Side Up Below Corner of Top Floretyle and Push Through Bundle



Turn Separator on Edge to Loosen Floretyle



Use Separator as Lever to Remove Floretyle

Safe Live Loads in Lbs. per Sq. Ft. for Truscon Steel Floretyle Construction

	6 in. Floretyle + 2 in. Concrete							8 in. Floretyle + 2 in. Concrete									10 in. Floretyle + 2 in. Concrete											
Span in Feet	½"x1½" Kahn Bars	½"x1½" Kahn Bars + ⅜" Square Rib Bars	½"x1½" Kahn Bars + ½" Square Rib Bars	¾"x2 3/16" Kahn Bars	¾"x2 3/16" Kahn Bars + ⅜" Square Rib Bars	¾"x2 3/16" Kahn Bars + ½" Square Rib Bars	¾"x2 3/16" Kahn Bars + ⅝" Square Rib Bars	½"x1½" Kahn Bars	½"x1½" Kahn Bars + ⅜" Square Rib Bars	½"x1½" Kahn Bars + ½" Square Rib Bars	¾"x2 3/16" Kahn Bars	¾"x2 3/16" Kahn Bars + ⅜" Square Rib Bars	¾"x2 3/16" Kahn Bars + ½" Square Rib Bars	¾"x2 3/16" Kahn Bars + ⅝" Square Rib Bars	¾"x2 3/16" Kahn Bars + ¾" Square Rib Bars	1½"x2¼" Kahn Bars	½"x1½" Kahn Bars	½"x1½" Kahn Bars + ⅜" Square Rib Bars	½"x1½" Kahn Bars + ½" Square Rib Bars	¾"x2 3/16" Kahn Bars	¾"x2 3/16" Kahn Bars + ⅜" Square Rib Bars	¾"x2 3/16" Kahn Bars + ½" Square Rib Bars	¾"x2 3/16" Kahn Bars + ⅝" Square Rib Bars	¾"x2 3/16" Kahn Bars + ¾" Square Rib Bars	1½"x2¼" Kahn Bars	1½"x2¼" Kahn Bars + ⅜" Square Rib Bars	1½"x2¼" Kahn Bars + ½" Square Rib Bars	Span in Feet
8	264	364						346									418											8
9	200	278	335					262	364								318	442										9
10	152	216	262	330				202	284	345	430						246	346	420									10
11	118	170	208	264				158	226	276	347						194	276	338	420								11
12	91	136	167	215	257			124	181	223	282	339					153	222	274	342	412							12
13	71	109	136	176	212	239		98	147	183	233	280	317				122	181	226	285	342							13
14	55	87	110	145	176	200		77	119	150	193	235	266				97	148	186	238	287	320						14
15	42	70	90	120	148	168	193	61	97	124	161	197	225	258			77	122	154	199	242	271	317					15
16	31	56	73	100	124	142	164	47	79	103	136	167	192	220	256		61	100	129	168	206	231	272		333			16
17		44	60	83	105	120	140	35	64	84	113	142	163	189	221	234	47	82	108	142	176	198	234	272	288			17
18		34	48	69	88	102	120	26	51	70	96	121	140	163	191	203	36	67	90	121	151	170	203	237	250	280		18
19			39	57	74	87	103	18	40	57	81	103	120	141	166	177		54	74	102	130	147	176	207	219	245	264	19
20			30	47	62	74	88		32	47	68	88	103	122	146	154		43	62	87	111	127	153	181	192	215	233	20
21									23	37	57	75	89	106	126	135		33	50	73	95	110	133	158	169	190	205	21
22										30	47	64	77	92	111	118			41	62	82	95	117	139	149	169	182	22
23										23	39	54	64	80	97	104			33	52	70	82	102	123	131	149	162	23
24											31	45	56	69	84	91				42	60	70	88	108	115	132	144	24
25											25	37	47	59	74	80				35	51	60	77	95	102	117	128	25
26																				28	42	51	67	83	90	104	114	26
27																					35	44	58	73	79	92	102	27
28																					28	36	50	64	69	82	90	28
29																							43	56	61	72	81	29
30																							36	48	53	64	71	30
Weight of Floor in lbs. per sq. ft.	47							53									58											
Center to center of Joists	24½"							24½"									25"											

	12 in. Floretyle + 2 in. Concrete												12 in. Floretyle + 3 in. Concrete														
Span in Feet	½"x1½" Kahn Bars	½"x1½" Kahn Bars + ⅜" Square Rib Bars	½"x1½" Kahn Bars + ½" Square Rib Bars	¾"x2 3/16" Kahn Bars	¾"x2 3/16" Kahn Bars + ⅜" Square Rib Bars	¾"x2 3/16" Kahn Bars + ½" Square Rib Bars	¾"x2 3/16" Kahn Bars + ⅝" Square Rib Bars	¾"x2 3/16" Kahn Bars + ¾" Square Rib Bars	1½"x2¼" Kahn Bars	1½"x2¼" Kahn Bars + ⅜" Square Rib Bars	1½"x2¼" Kahn Bars + ½" Square Rib Bars	1½"x2¼" Kahn Bars + ⅝" Square Rib Bars	½"x1½" Kahn Bars	½"x1½" Kahn Bars + ⅜" Square Rib Bars	½"x1½" Kahn Bars + ½" Square Rib Bars	¾"x2 3/16" Kahn Bars	¾"x2 3/16" Kahn Bars + ⅜" Square Rib Bars	¾"x2 3/16" Kahn Bars + ½" Square Rib Bars	¾"x2 3/16" Kahn Bars + ⅝" Square Rib Bars	¾"x2 3/16" Kahn Bars + ¾" Square Rib Bars	1½"x2¼" Kahn Bars	1½"x2¼" Kahn Bars + ⅜" Square Rib Bars	1½"x2¼" Kahn Bars + ½" Square Rib Bars	1½"x2¼" Kahn Bars + ⅝" Square Rib Bars	1½"x2¼" Kahn Bars + ¾" Square Rib Bars	1½"x2¼" Kahn Bars + ⅞" Square Rib Bars	Span in Feet
8	497												528														8
9	379												401														9
10	295	414											311	438													10
11	233	331											243	349													11
12	185	268	329	411									193	281	350	437											12
13	149	219	271	341									153	228	287	361											13
14	120	181	225	285	345								122	187	238	301	365										14
15	96	149	189	241	293	331							96	153	197	253	308	350									15
16	77	124	158	204	250	284							76	125	165	213	262	299									16
17	61	102	133	173	214	244	283		347				58	103	137	180	223	257	298								17
18	47	84	112	148	184	211	246	287	303				44	83	114	153	191	221	257		321						18
19	36	69	94	126	159	183	214	251	266	298			32	68	95	130	164	190	223	264	280	314					19
20	27	56	78	108	137	159	187	220	234	263	280		22	53	78	110	140	164	195	231	246	276					20
21		45	65	92	118	138	163	194	206	232	247	275		41	64	92	120	142	169	202	216	243	265				21
22		36	54	78	102	121	144	171	183	206	221	245		31	52	78	104	123	148	178	190	216	237	258			22
23			44	66	89	105	127	151	162	183	197	219		22	41	65	88	106	129	156	168	191	210	229			23
24			35	55	76	91	110	133	143	163	175	195		14	31	53	74	91	112	137	148	169	186	204	229		24
25			28	46	65	79	97	118	127	145	156	176		7	23	43	63	78	97	121	130	149	166	182	205		25
26				38	55	69	85	105	113	130	140	158				34	53	67	84	106	115	132	148	163	184	209	26
27					47	59	75	93	100	116	126	142				27	44	57	73	92	102	118	132	146	166	189	27
28					39	50	64	81	88	103	112	127				19	35	47	62	81	88	104	117	130	148	170	28
29					32	43	56	72	78	92	100	115				13	28	39	53	71	78	92	105	116	133	153	29
30					26	36	48	63	69	82	89	103				7	21	32	45	61	67	81	92	104	119	138	30
Weight of Floor in lbs. per sq. ft.	63												75														
Center to center of Joists	25"												25"														

Explanations of Floretyle Tables

Tables give the safe live loads which can be placed on the construction when spans are continuous at both ends. The dead weight of the construction has been provided for, but any finished flooring placed on it must be considered as part of the live load. Deduct weight of floor finish from loads in table to obtain net safe live load. A plastered ceiling is included in the dead load, so if ceiling is omitted, loads in tables can be increased by 8 lbs. per sq. ft.

The joist spacing is 24½" center to center for 6" and 8" Tyle and 25" center to center for 10" and 12" Tyle, 4" joists having been used in all cases.

Basis of Tables: Bending Moment = $\frac{1}{12}wl^2$.

The loads in tables shown should be used *only where spans are continuous at both ends*.

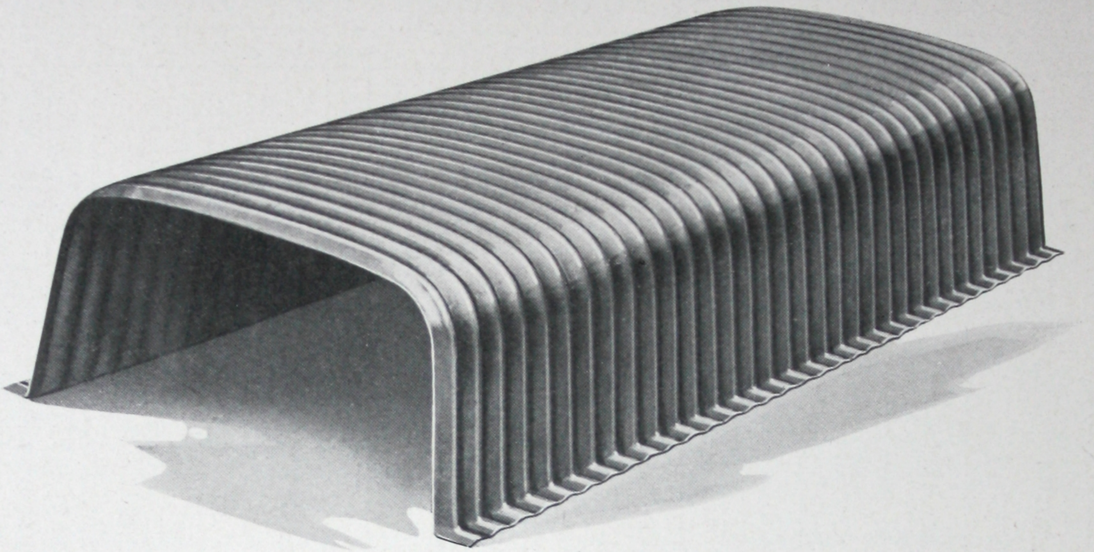
For safe loads on simple spans use
W = 8/12 (w + wt. of Floor)—wt. of Floor.

For safe loads on spans continuous at one end only, use W = 10/12 (w + wt. of Floor)—wt. of Floor.

Where w = load given in table.

The steel shown is to be placed in the bottom of the joist. To provide for the negative moment in spans continuous at one or both ends place in the top of the slab over the supports an additional area of steel equal to ½ that shown in the table. For anchorage for simple spans place in the top of the slab at the supports ¼ as much steel as that shown in the table.

Use cantilever tyle at the ends of all continuous joists which carry the loads shown to the right of the heavy dashed line in each table.



TRUSCON CORRUGATED FLORETYLES

In addition to the Ribbed Steel Floretyles described in the preceding pages, we are prepared to furnish, where desired, a Corrugated Steel Floretyle. The Corrugated Tyles differ from the Ribbed in that they are furnished in shorter lengths and lack the deep stiffening ribs across the tops. The profile has been so designed that the concrete quantities for both the Corrugated and Ribbed Tyles will be identical.

Corrugated Steel Floretyles are furnished in nominal lengths of 2′-4½″ and 3′-9″, allowing approximately 2″ for end laps.

Maximum Lengths of Rows of Corrugated Floretyles with End Caps to Close the Rows at Each End

Combination of Tyles			Maximum Length of Rows	Combination of Tyles			Maximum Length of Rows
No. of 2′-4½″	No. of 3′-9″	End Caps		No. of 2′-4½″	No. of 3′-9″	End Caps	
2	0	2	4′-9″	9	0	2	21′-4½″
1	1	2	6′-1½″	6	2	2	21′-9″
3	0	2	7′-1½″	3	4	2	22′-1½″
0	2	2	7′-6″	0	6	2	22′-6″
2	1	2	8′-6″	8	1	2	22′-9″
4	0	2	9′-6″	5	3	2	23′-1½″
1	2	2	9′-10½″	2	5	2	23′-6″
3	1	2	10′-10½″	10	0	2	23′-9″
0	3	2	11′-3″	7	2	2	24′-1½″
5	0	2	11′-10½″	4	4	2	24′-6″
2	2	2	12′-3″	1	6	2	24′-10½″
4	1	2	13′-3″	9	1	2	25′-1½″
1	3	2	13′-7½″	6	3	2	25′-6″
6	0	2	14′-3″	.	.	.	....
3	2	2	14′-7½″	3	5	2	25′-10½″
0	4	2	15′-0″	11	0	2	26′-1½″
5	1	2	15′-7½″	0	7	2	26′-3″
2	3	2	16′-0″	8	2	2	26′-6″
7	0	2	16′-7½″	5	4	2	26′-10½″
4	2	2	17′-0″	2	6	2	27′-3″
1	4	2	17′-4½″	10	1	2	27′-6″
6	1	2	18′-0″	7	3	2	27′-10½″
3	3	2	18′-4½″	4	5	2	28′-3″
0	5	2	18′-9″	12	0	2	28′-6″
8	0	2	19′-0″	1	7	2	28′-7½″
5	2	2	19′-4½″	9	2	2	28′-10½″
2	4	2	19′-9″	6	4	2	29′-3″
7	1	2	20′-4½″	3	6	2	29′-7½″
4	3	2	20′-9″	11	1	2	29′-10½″
1	5	2	21′-1½″	0	8	2	30′-0″

Properties of Corrugated Floretyles

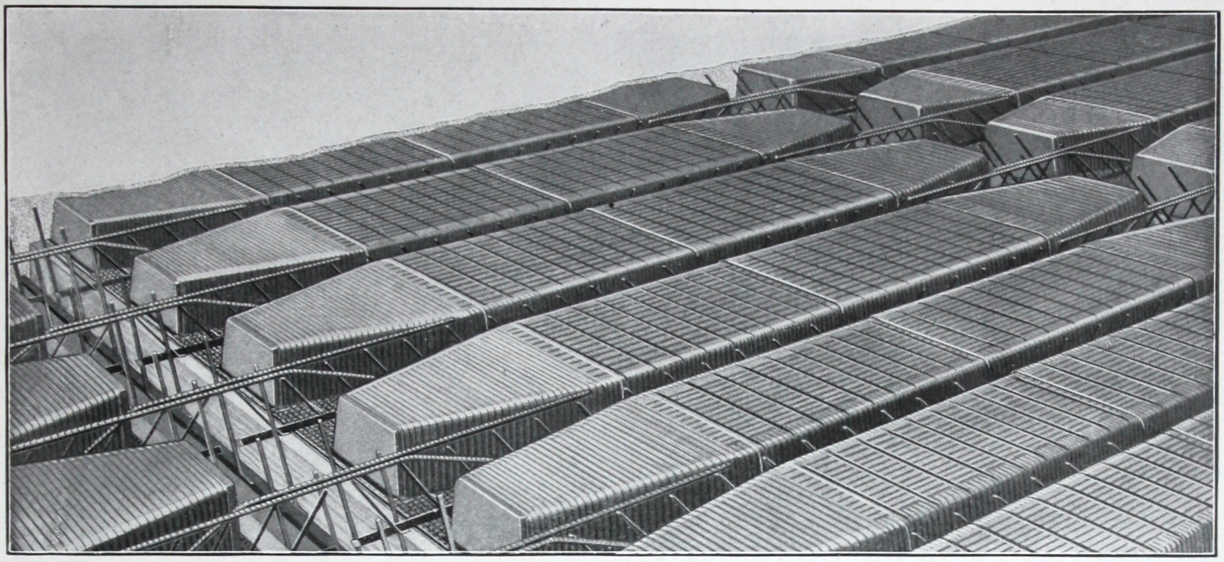
Standard Heights of Floretyles: 6″, 8″, 10″, and 12″.

Approximate Width at Base: 20½″, exclusive of ⅝″ flanges along bottom edges.

Standard Lengths (Nominal) of all sizes 3′-9″ and 2′-4½″. Actual lengths are approximately 2″ longer to provide for lap.

Floretyles are made with one end ¼″ wider than the other, so that they can be easily lapped.

End Caps, manufactured under special dies, are used to close the ends of Floretyles. The End Caps are smaller at the base than Floretyles, but are readily placed by sliding them over the ends from above.



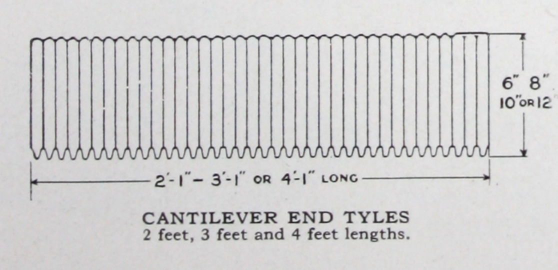
CANTILEVER FLORETYLE CONSTRUCTION

Flat Ceilings of Long Span—Maximum Economy of Materials

Cantilever designs are notably strong and rigid, and exceptionally economical of materials. The use of cantilevers in reinforced solid concrete construction necessitates arched ceilings, which often present decided disadvantages. Cantilever Floretyle construction, besides having every advantage of economy and strength, provides absolutely flat ceilings of long span.

The Cantilever End-Tyles are used with Standard Floretyles as shown in illustration. The maximum widths of joists at supports (where the strains are greatest in cantilever design), tapers down to a narrow joist in the central part of the span. The full value of the materials is thus developed at every point in the span, assuring maximum economy.

The economy of cantilever design is apparent, when one realizes that if the cantilever is one-fourth of the span, the central bending moment is only one-fourth of that of a freely supported beam, while if the cantilever is only 15%, the central bending moment is reduced over 50%. Of course the reverse bending moments at the supports are increased correspondingly, but this only adds a comparatively small amount of steel, while the increased width of joist provides the extra concrete. The cantilever acts as a rigid bracket to increase the rigidity and stiffness of the construction.



CANTILEVER END TYLES
2 feet, 3 feet and 4 feet lengths.

In designing, particular attention should be given to the amount of cantilever in relation to the span and the loading; also in regard to continuity reinforcement and outside panels. Ordinarily this construction is not recommended for light loads, such as roofs, etc. Our engineers will be glad to make suggestions for the most efficient and economical design for your particular work.

Properties of Cantilever Floretyles

Standard Heights 6, 8, 10, and 12 inches.

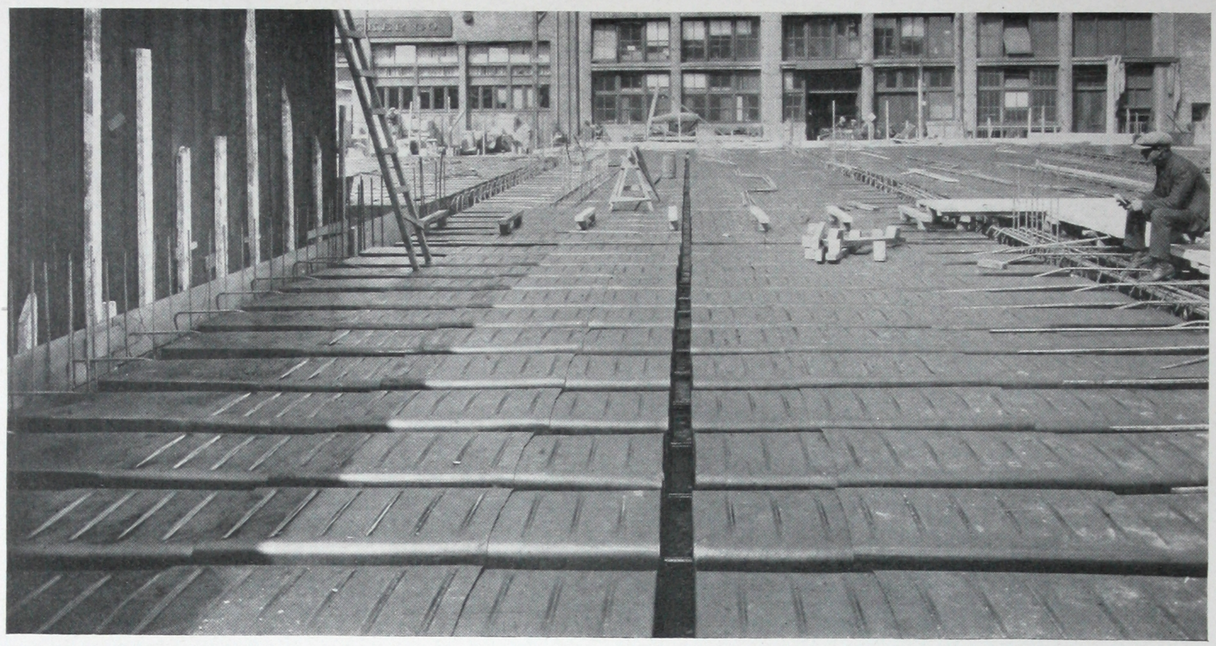
14" Cantilever Floretyles are not carried in stock, but are furnished on special order, if sufficient time is allowed.

Approximate width at wide end 20½ in.—at narrow end 13¾ in.

Lengths (nominal) 2 ft., 3 ft. and 4 ft. Actual lengths are 1 inch greater to allow for end laps.

Cantilever End-Tyles are placed under the free end and over the ribbed end of Floretyles, both lefts and rights being exactly the same.

Small end of Cantilever Floretyle is closed by special Cantilever End Caps, as shown in above illustration. These End Caps are placed by sliding over the ends from above and are tacked to the forms at the corners the same as Standard End Caps.



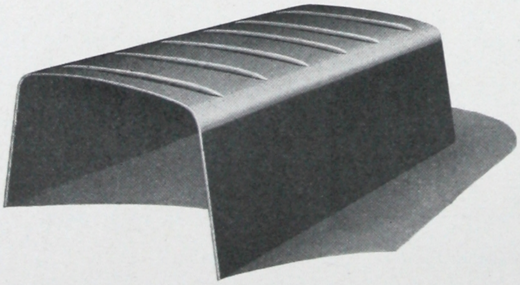
Removable Floretyles in Garage Building for the Stevenson Street Garage Co., San Francisco, Calif.
Cahill Brothers, General Contractors
Arthur S. Bugbee, Architect

TRUSCON REMOVABLE FLORETYLES

Truscon Removable Steel Floretyles are manufactured from 16-gauge steel. They are so designed as to be readily removable, thus making the construction exceptionally economical owing to repeated use, and consequent saving in form work.

Removable Floretyles are extremely sturdy. They are manufactured with ribs across the top to add to their rigidity. This feature also eliminates the necessity of excessive crowning, which is wasteful of concrete.

Truscon Removable Floretyles are furnished either with straight sides as shown in illustration, or with a 3/8″ flange along the bottom edge. Prices and further information furnished on request.



Properties of Removable Floretyles

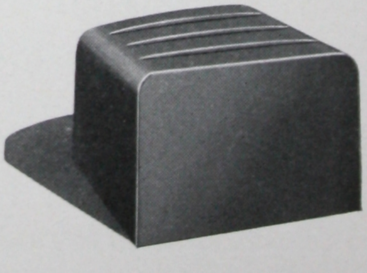
Heights: 6″, 7″, 8″, 9″, 10″, 11″, 12″, 13″, 14″.

Approximate Width at Base: 20″.

Standard Lengths (nominal): 3′0″.

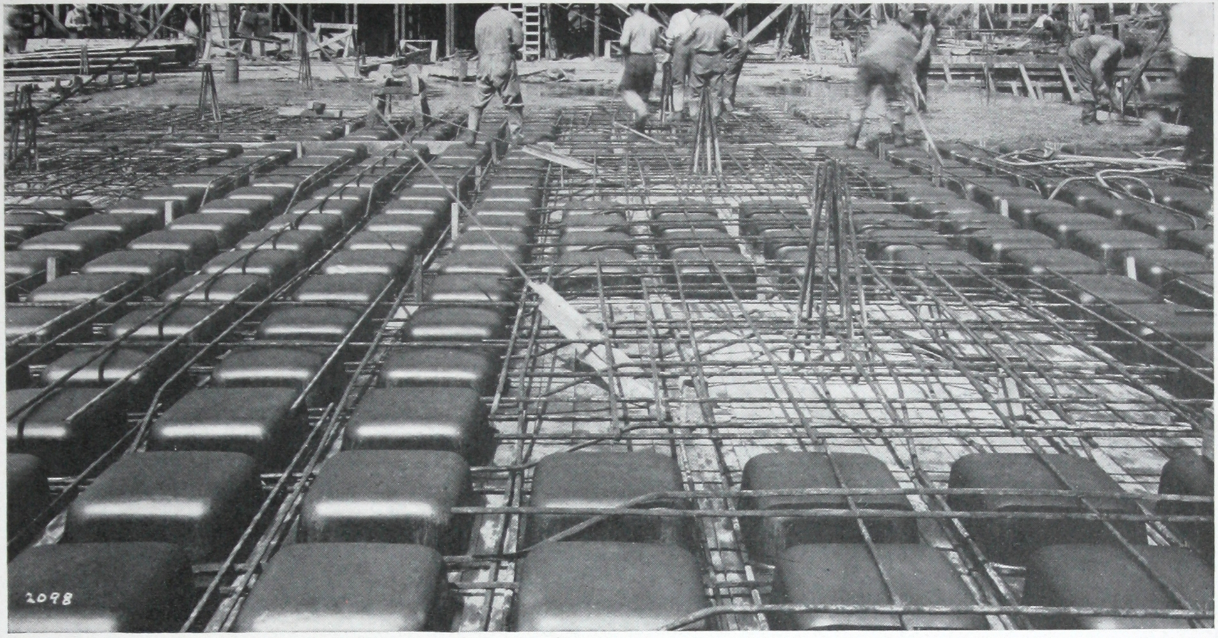
Actual length is 1″ greater to allow for end laps.

End Tyles to Close Rows



End Tyles to close rows of Floretyles are furnished in all heights and lengths of 1′10″.

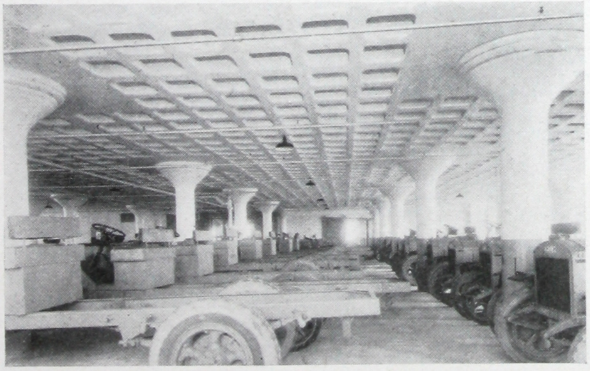
Spacer Chairs are furnished in standard widths of 4″, 4½″, 5″.



Grieble & Ebeling, Architects — Euclid & E. 71st St. Bldg., Cleveland, Ohio — Truscon Steel Floredomes — Craig Curtiss Co., Gen. Contrs.

TRUSCON REMOVABLE FLOREDOMES

Truscon Steel Floredomes have the advantages of Floretyle, but are adapted to two-way construction in which the loads are carried in two directions to the supports. The use of **removable** Floredomes provides the added economy incident to the repeated use of the Floredomes. This construction is especially economical in buildings of several floors or of several typical floor slabs as the Floredome equipment may be reused as rapidly as the construction progresses.



Noyes-Buick Bldg., Boston, Mass.
A. S. Bowditch, Archt. Fred T. Ley & Co. Inc., Contrs.
Henry F. Bryant, Struc. Engr.
Underside of ceiling constructed with Truscon Floredomes.

Truscon Removable Floredomes are formed from 16 Gauge Sheets by powerful presses and are absolutely uniform and exact. Their smooth, true surfaces make them especially easy to remove and clean after the concrete has set. To facilitate their removal, the Floredomes are furnished with a hole punched through each side into which a hook or pointed bar may be inserted. To insure correct spacing the flanges of the Floredomes are punched so that they can be lightly nailed to the supporting form work.

Properties of Truscon Removable Floredomes

Truscon Removable Floredomes are pressed from 16 Gauge Sheets.

Standard Heights are 6″ and 8″.

Size of Removable Floredomes, over all, is 22″ x 22″. There is a one-inch flange on all sides of the Floredome, making the base of the Floredome exclusive of the flange 20″ x 20″.

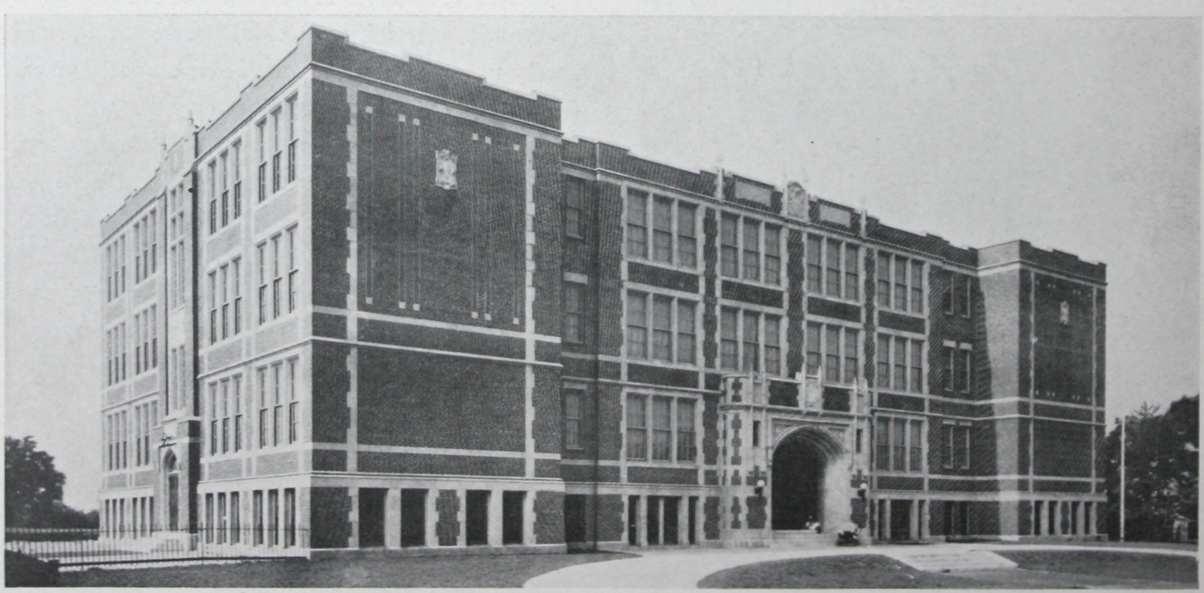
Railway Exchange Bldg., St. Louis, Mo.
Lower seven floors occupied by Famous & Barr Co.

Mauran, Russell & Crowell, Architects
21 Stories High, One Block Square
Floor Area, 1,360,000 Sq. Ft.

Over 30 Acres of Floretyle Construction.

A Test Load of 491,651 Lbs. or 360 Lbs. per Sq. Ft. was placed on a full-sized panel of this Floretyle Construction and the deflection was less than ½ inch. The panel was built under severest weather conditions.

The light weight of the Floretyle Construction effected a marked saving in the girders, columns and foundations.



Murphy, Hindle & Wright, Archts.

George G. West School, Providence, R. I.
Truscon Floretyle Construction

Hope Building Co., Contrs.